ANALYSIS OF FACTORS AFFECTING THE CAPITAL STRUCTURE IN INDONESIA STOCK EXCHANGE

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Abstract

This study aimed to analyze the factors affecting the capital structure of the enterprise. Variables used profitability, size, tangibility, growth, earnings volatility, liquidity, and business risk. This study uses a quantitative approach to the analysis of multiple linear models. This study used a sample of manufacturing business entity registered in Indonesia Stock Exchange period 2009 - 2013. The samples used in this study were 328 observations. The results showed that the variables of profitability and earnings volatility significantly negative effect on the capital structure (debt). Variable size, tangibility, and positively affect growth significantly to capital structure (debt). However, the study also found that variable liquidity and business risk significantly negative effect on the capital structure (debt).

Keywords: capital structure, pecking order theory, trade – off theory, agency theory.

RESEARCH BACKGROUND

Globalization is happening now lead the business into a very tight competition. Companies are required to compete on a competitive basis to be able to survive. In order to survive, companies not only focus on improving productivity, but also must be able to manage its finances well, especially related financing needs. The Company requires sufficient funds to run the business, which can be obtained either from external financing and internal financing. Funding decisions regarding the decision on how the composition of the funding will be used by the company. Mix of equity and debt in the long-term financing structure of a company known as capital structure (Brigham and Houston, 2001). Capital structure decisions concerning the funding to do financial managers is to determine how much should be borrowed by considering the benefits and costs of the use of debt (Murhadi, 2011). Sheikh and Wang (2011) also argues if any funding decision will give rise to costs for companies and may lead the company to bankruptcy. Therefore, the role of financial manager is very significant in determining the proportion of funding sources in order to produce an optimal capital structure, and ultimately will improve the welfare of the owners. Many studies have

been done on the factors affecting capital structure. Research conducted Sheikh and Wang (2011) using the 7 independent variables, namely profitability, size, non - debt tax Shield, tangibility, growth opportunities, earnings volatility, and liquidity. The results showed that the profitability, liquidity, earnings volatility, and tangibility (asset structure) significantly negative effect, while firm size significant positive effect on the debt ratio. However, non - debt tax shield and growth opportunities not appear significantly to debt ratio. While the research conducted Chen et al. (2014) on a non - financial in China is only using six independent variables, namely: size, growth, profitability, assets tangibility, tax shields, and business risk (risk). The results showed that the size, intangibility, and business risk significant positive effect on the capital structure, whereas a negative effect on profitability. However, the variable Growth and the tax shield do not significantly influence the capital structure. Murhadi (2011) conducted a study on company trade sector in ASEAN countries. The study uses six independent variables, namely: profitability, firm size, asset tangibility, growth companies, and non - debt tax shield. The research proves the existence of significant positive effect between asset tangibility and size of the company's debt, while profitability and growth has a significant negative effect on the debt. However, non - debt tax shield is not significantly positive result. Research Seftianne & Hand (2011) using 8 independent variables are profitability, liquidity, company size, business risk, growth opportunity, managerial ownership, and asset structure. The results showed that the growth opportunity and the size of the company influence the capital structure. However, this study found the profitability, liquidity, business risk, managerial ownership, and asset structure did not affect the capital structure.

Based on previous research, this study uses seven independent variables to analyze the effect on the capital structure, the profitability, size, asset tangibility, growth, earnings volatility, liquidity, business risk. Profitability ratio used to see the effectiveness of the company to generate profits from the resources owned by the company. According to the Pecking Order Theory higher corporate profits, then the more internal funds available so that the use of debt will be reduced. Companies with a high level of profitability would choose to keep most profits for reinvestment of the company. Companies that have large retained earnings will be able to fund its investment. Internal funding had a lower risk than external funding. The larger the internal funds, it will be the smaller companies use debt. This statement is supported by the results of the Sheikh and Wang (2011), Chen et al. (2014) and Murhadi (2011), which implies a negative influence between profitability with debt. Sheikh and Wang (2011) in her study suggested a negative effect on the profitability of the debt, due to external funding required to obtain a high cost. While the research results Seftianne and Hand (2011) suggested a positive influence between the profitability of the debt. That's because companies with high profit will encourage creditors to lend funds to the company.

The next independent variable is size. Companies with a large size can use more debt than smaller companies. The greater the assets owned, will enable the company to obtain debt because the assets can be pledged as collateral for the debt. This statement is supported by research conducted by Sheikh & Wang (2011), Chen et al (2014), Murhadi (2011), and Seftianne & Hand (2011), which states the positive influence the size of the debt. Sheikh and Wang (2011) reported the results of his research in accordance with the Trade - Off Theory, which predicts a positive relationship between size and debt; this is because the larger companies have the possibility of experiencing financial distress. Um study (2001) also showed that the cost of supervision for large companies is lower than small firms. So that large companies tend to use more debt than small firms.

The next variable is the asset tangibility. Companies that have more tangibility of assets will have a better position when performing loans. Asset tangibility can be used as collateral for loans granted by the lender. If the company fails to meet its obligations, then the item will be confiscated by creditors to settle the obligation. Companies that have large asset tangibility, is expected to be a lower risk of failure, and this allows it to use more debt (Murhadi, 2011). Myers (1984) in Murhadi (2011) stated that the issuance of debt secured by the assets will reduce asymmetric information in connection with the financing costs. Differences in information between the parties involved allowing the moral hazard problem. In other words, the debt that is secured by the assets can reduce asymmetric information so that the impact on the positive relationship between real assets and debts. But Sheikh Research & Wang (2011) proves there is a negative relationship between asset tangibility with debt. This is consistent with the Agency Theory is the manager tried to utilize the company's fixed assets for an allowance greater than the company used as collateral to obtain debt.

The next variable is growth. Companies with high growth will rely on external financing to fund this growth. On the contrary, companies with lower growth rates tend to use internal funding. Research conducted Sheikh & Wang (2011), Chen et al (2014), Murhadi (2011) and Seftianne & Hand (2011) proves there is a negative relationship between the growths of the debt. Murhadi (2011) expressed a negative influence on the growth of this debt because the companies that have high growth have also a higher risk in terms of stability of income. Fluctuations in earnings to encourage companies not to use too much in debt, it is given the debt is funding a flat fee. Consistent with this, Titman and Wessels (1988) states that the costs associated with the existence of an agency relationship between the shareholders and the holders of these bonds will be higher in industries that are growing, so there is a negative relationship between growth and debt. Research Chung (1993), Rajan and Zingales (1995) also found a negative relationship between growth and debt levels in developed countries.

The next variable is the volatility of earnings. Chen and Jiang (2001) mentions that the work of poor management will increase earnings volatility thus increasing the chances of financial failure, and this will result in companies experiencing difficulties to obtain additional external funding (debt). Mahadwarta (2002) reported earnings volatility often associated with the condition of instability or level of business risk. Companies with high earnings volatility will lead to uncertainty about the outlook for the future. The presence of high revenue volatility will increase the cost of bankruptcy. Bradley et al. (1984) in Mahadwarta (2002) also states the increased volatility of earnings will impact the rising cost of bankruptcy of the company. Therefore, as a consequence of management will reduce the use of debt. Research Sheikh & Wang (2011), also proves there is a negative relationship between earnings volatility with debt. High earnings volatility indicates a high risk enterprise, so that the creditor does not provide loans to companies.

Liquidity indicates the level of the company's ability to meet short-term liabilities using current assets owned (Seftianne & Hand, 2011). Research Sheikh & Wang (2011) proves there is a negative relationship between liquidity with debt, this is because the liquid assets the company is able to cover the short-term debt. Results of this research was supported by the Pecking Order Theory, where companies with high liquidity prefer internal financing to fund new investments in order to avoid the agency problems caused by external funding.

Business risk is the risk when the company was unable to cover its operational costs (Gitman 2006: 215). The company with high business risks tends to avoid the use of debt financing compared with companies with lower business risk. Results of the study Chen et al (2014) suggest there is a relationship which varies between business risks with debt.

Based on the above explanation, the purpose of this study is to determine: (1) whether there is a negative influence between profitability and debt ?; (2) whether there is a positive influence between size and debt; (3) whether there is a positive influence between asset tangibility and debt; (4) whether there are negative effects between growth and debt; (5) whether there is a negative influence between earnings volatility and debt; (6) whether there is a negative influence between liquidity and debt; and (7) whether there is a negative influence between business risk and debt.

RESEARCH METHODS

This study used a sample of all companies listed on Bursa Manufacturing effect is Indonesia during the period 2009 - 2013, with the following characteristics: the company has published audited financial statements coherently each year during the period 2009 - 2013 and the company's equity is positive during the study period. The

research used a sample of 82 companies that meet the criteria of the sample. The independent variables consist of: profitability, firm size, asset tangibility, growth opportunities, earnings volatility, liquidity, and business risk, while the dependent variable is capital structure.

This study uses multiple linear regression data processing to meet the classical assumptions. The research model as follows:

$$DEBT=\alpha+\beta1PROF+\beta2SIZE+\beta3TANG+\beta4GROW+\beta5EVOLT+\beta6LIQ+\beta7RISK+e$$

Capital structure is measured by using a debt ratio (Debt). Profitability (Prof) is measured using return on assets (Sheikh & Wang, 2011). Size is measured by using the natural logarithm of total assets (Seftianne & Hand, 2011). Tangibility of assets (Tang) is measured by dividing the fixed assets to total assets (Murhadi, 2011). Growth (grow) is measured by the percentage change in total assets (Murhadi, 2011). Earnings volatility (evolt) measured by the standard deviation of EBIT to total assets (Sheikh & Wang, 2011). Liquidity (liq) is measured by using a current ratio. Business risk (risk) is measured by the standard deviation of stock returns on a monthly basis for one year (Seftianne & Hand, 2011).

RESULT AND DISCUSSION

Descriptive Statistics

Table 1 presents descriptive statistics

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DEBT	328	,00	,73	,1320	,12951
PROF	328	-,62	,56	,1062	,12950
SIZE	328	21,19	32,90	27,9050	1,99332
TANG	328	,05	,95	,3862	,19013
GROWTH	328	-,59	3,27	,1655	,25760
EVOL	328	,00	,49	,0329	,05238
LIQ	328	,15	75,42	2,5860	4,63939
RISK	328	,00	,84	,1413	,11057
Valid N (listwise)	328				

Based on Table 1, Size Company has the largest average value, while the smallest average value owned by the variable earnings volatility. Standard deviation with the greatest value contained in the variable size and liquidity.

Classical assumption test for multicollinearity produce VIF value for all the independent variables is less than 5, means free multicolinearity. Autocorrelation to generate value DW 1.977, these results are in the quadrant free autocorrelation. For heteroscedasticity test using Park Test, where the results show is free to the problem of heteroscedasticity.

The next in Table 2 are presented the test results of inferential statistics

Table 2. Statistics Result

DEBT = -0,112 + (–0,278).PROF + 0,07.SIZE + 0,243.TANG + 0,043.GROWTH + (-0,352).EVOL + (-0,002).LIQ +(- 0,008).RISK			
Model	Unstandardized Coefficients		Hypothesis Expectation
	B	Sig	
(Constant)	-,112	,242	
PROF	-,278	,000*	Negative
SIZE	,007	,043*	Positive
TANG	,243	,000*	Positive
GROWTH	,043	,081**	Negative
EVOL	-,352	,005*	Negative
LIQ	-,002	,272	Negative
RISK	-,008	,888	Negative
F Significant = 0.000 *			
R Squares = 0,261			
Adjusted R Square = 0,245			

* Significant at 5%
** Significant at 10%

Based on the table 2 above proved that the independent variables (profitability, size, tangibility, growth, earnings volatility, liquidity, and business risk) simultaneously affect the dependent variable (capital structure) significantly. The coefficient of determination (R^2) of 0.261, indicating that changes in the capital structure (debt) can be explained by profitability, size, tangibility, growth, earnings volatility, liquidity, and risk by 26.1% while the remaining 73.9% is explained by variables outside variable profitability, size, tangibility, growth, earnings volatility, liquidity and business risk.

Based on Table 2, the data processing results show profitability variables have a significant negative effect on the capital structure. This means that the greater the profit produced by the company, the lower its debt requirements. Pecking Order Theory also stated the company with high profitability, the company's retained earnings also increased, and this will reduce debt (Myers, 1984). A company with high profitability chooses to make an arrest in part because the company's profits for

reinvestment internal funding less risky when compared to external funding. This is consistent with studies Sheikh & Wang (2011), Chen et al (2014), and Murhadi (2011) which states there is a significant negative effect on the profitability of the debt.

Variable sizes have significant positive effect on the debt. This means that the bigger the size of the company, companies tend to use more debt. Companies that have large size will allow the company to get a loan because it has a great asset as collateral; in addition the company also has a low probability of financial distress. This is consistent with studies Sheikh & Wang (2011), Chen et al (2014), Murhadi (2011), and Seftanne & Hand (2011).

Variable asset tangibility has a significant positive effect on debt. This means the company has large real assets that are expected to be lower risk of failure and allows obtaining greater debt. The issuance of debt secured by the assets will reduce asymmetric information in connection with the financing costs. Differences in information between the parties involved allowing the moral hazard problem. In other words, the debt that is secured by the assets can reduce asymmetric information so that the impact on the positive relationship between real assets and debts. Gitman (2008) also argues: companies with large fixed assets tend to use more debt than companies with smaller fixed assets. This is consistent with studies of Chen et al (2014) and Murhadi (2011) which states that there is a significant positive relationship between asset tangibility and debt.

Variable growth proved significant positive effect on the debt. Song (2005) in Indrajaya (2011) state companies with a high growth rate would imply a higher demand would need external funding. This is consistent with the Pecking Order Theory, when the company requires external funding to meet the needs investment, and then the company would prefer to use the debt first rather than by issuing new shares. The higher the growth opportunities will lead to the higher information asymmetry occurs, so that according to Myers and Majluf (1997), the company will use the debt to suppress the information asymmetry that may occur.

Earnings volatility has a significant negative effect on the capital structure. This means that the higher level of earnings volatility means greater uncertainty in a profit, the management will reduce the use of debt. Mahadwarta (2002) also stated earnings volatility often associated with the condition of instability or the level of the company's business risk arising from uncertainties about the outlook for the future. The presence of high revenue volatility will raise the cost of bankruptcy that is nothing but the agency costs of debt. Bradley et al. (1984) in Mahadwarta (2002) reported increased revenue volatility will have an impact on the rising costs of the bankruptcy of the company. Therefore, the consequences will reduce the use of debt management in order to oversee the agency conflict. This is consistent with studies Sheikh & Wang

(2011) which states that there is a significant negative correlation between earnings volatility with debt.

Liquidity variables proved negative but not significant effect on the debt. Pecking order theory, stating that the business entity that has a high level of liquidity will tend to use internal funds rather than external funding in the form of debt, as companies with a high level of liquidity has a large internal funding to advance used to finance investments before use of external financing in the form of debt. Business risk variables do not have a significant effect on the debt. This means that companies with high business risks will tend to avoid using debt financing compared with a company that has a lower business risk. Companies with highly fluctuating cash flow will be aware that the use of risky debt will be less favorable than with equity, so companies are forced to use the equity to meet its financing in order to avoid financial difficulties in the company. This is consistent with the Pecking Order Theory, which states that the company prefers the use of internal funds, the funds derived from cash flow, retained earnings, and depreciation.

CONCLUSION

Based on F test proved that the variable profitability, size, tangibility, growth, earnings volatility, liquidity and business risk jointly significant effect on the company's debt Manufacturing listed on the Indonesia Stock Exchange during the period 2009 - 2013. The coefficient of determination (R2) of 0.261, indicating that the debt can be explained by changes in profitability, size, asset tangibility, growth, earnings volatility, liquidity and business risk by 26.1%, while the remaining 73.9% is explained by other variables. Based on t test shows five variables (profitability, size, asset tangibility, growth, and earnings volatility) proved a significant effect on the debt. While variable liquidity and business risk partially no proven effect on the debt. This study has limitations where the coefficient of determination is low enough, so it is possible to do further research, either using other independent variables or increasing the number of independent variables. Moreover, it can use a larger sample that all companies listed on the Indonesia Stock Exchange in order to reflect the overall capital market.

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